

Enhancing Maternal and Newborn Health by Improving Peripartum Mental Health and Substance Use Disorder Treatment

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Peripartum Mood and Anxiety Disorder (PMADs)

1 in 5

women around the world will suffer from a
maternal mental health complication



Trajectories of Maternal Postpartum Depressive Symptoms

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Followed 5,000 Mothers Following Birth Over 3 Years

- Assessed depressive symptoms at 4, 12, 24, and 36 months following delivery.
- 1 in 4 women experienced high levels of depressive symptoms at some point in the three years after giving birth.

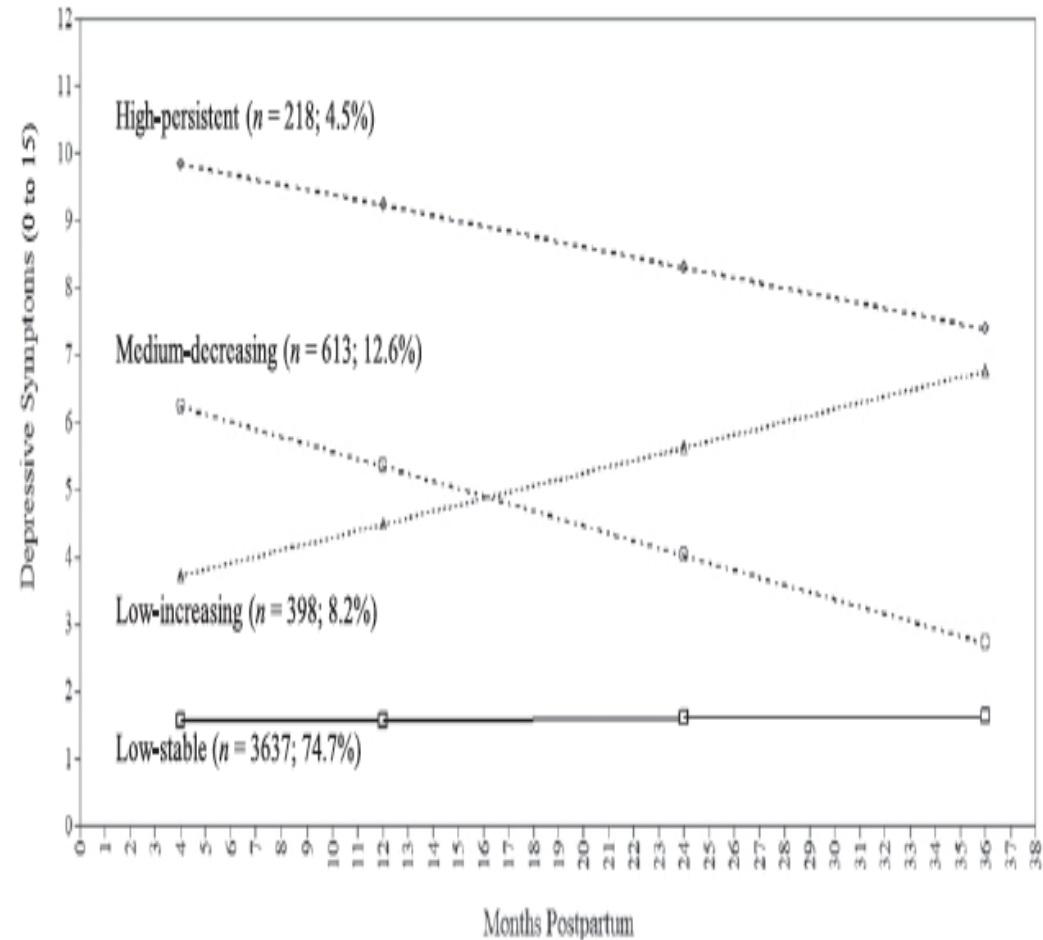


FIGURE 1

Estimated means of the 4-class solution of the latent class growth mixture model.

Maternal Mental Health Affects Mom, Child and Family

C-sections
Prematurity
Low Birth Weight
NICU Admissions

Cognitive, Motor, Growth Delays.
Behavioral, Academic, Mental
Health Problems



Poor Prenatal Care
Smoking
Substance Use

Difficulty Bonding
Breastfeeding
Divorce

Perinatal Substance Use Disorders

Licit & Illicit Substance Use is Common in Pregnancy & Postpartum

~10-15% of pregnant women use alcohol or tobacco in pregnancy

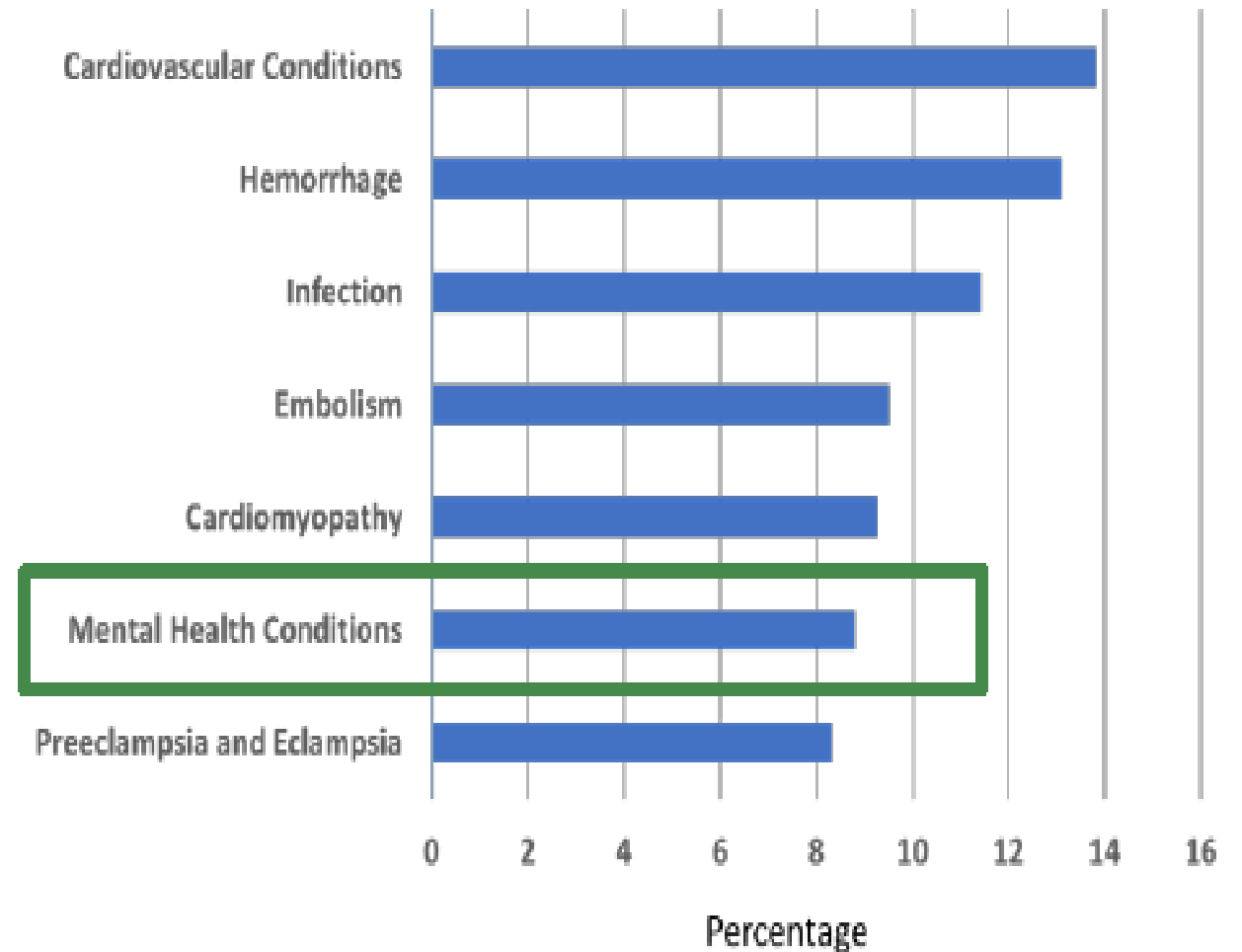
15-20% of pregnant women are prescribed an opioid medication

5-7% of pregnant women use marijuana

6.5 per 1,000 pregnant women have an Opioid Use Disorder

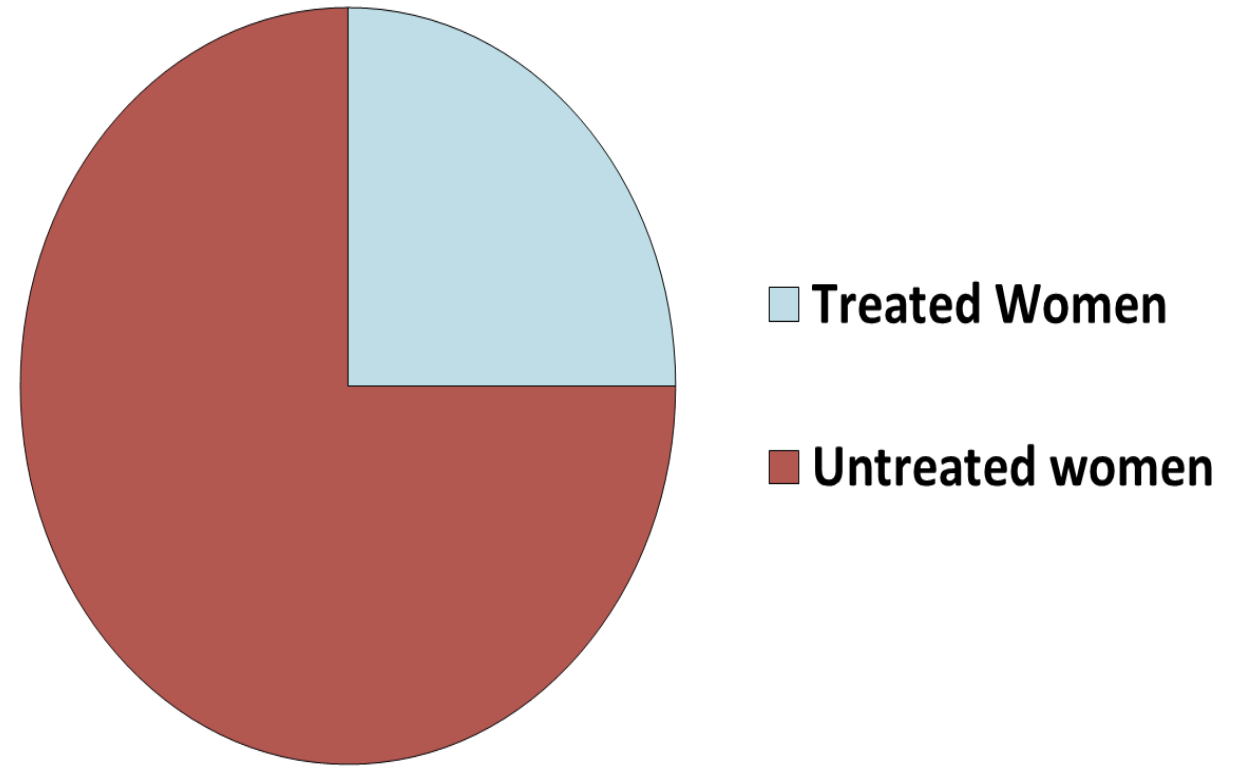
Substance	Tobacco	Alcohol	Marijuana	Opioids	Stimulants
Obstetric, Newborn, Child Outcomes	Ectopic pregnancy Miscarriage Abruptio Low birth weight Preterm birth Stillbirth SIDS Overweight/obese Asthma ADHD Developmental delays Behavioral & cognitive problems	Preterm birth Low birth weight SGA Motor dysfunction Fetal Alcohol Syndrome Neurodevelopmental disorder	NICU admissions Preterm birth Cognitive problems	Cardiac arrest Preterm birth Low birth weight Intrauterine growth restriction Placental abruption C-Section Increased length of stay Neonatal Abstinence Syndrome (NAS) [Figure 3]	Miscarriage Placental abruption Preterm birth Stillbirth Low birth weight Intrauterine growth restriction

Suicide &
Drug Overdose
are a leading
cause of
maternal death



Davis NL, Smoots AN, Goodman DA. Pregnancy-Related Deaths: Data from 14 U.S. Maternal Mortality Review Committees, 2008-2017. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Department of Health and Human Services; 2019

The vast majority of mental health conditions are unrecognized & untreated.



Haight SC, Byatt N, Moore Simas TA, Robbins CL, Ko JY. Recorded Diagnoses of Depression During Delivery Hospitalizations in the United States, 2000-2015. *Obstet Gynecol.* 2019 Jun; 133(6):1216-1223.

Bauman BL, Ko JY, Cox S, et al. *Vital Signs*: Postpartum Depressive Symptoms and Provider Discussions About Perinatal Depression — United States, 2018. *MMWR Morb Mortal Wkly Rep* 2020;69:575–581.

The Pandemic Is a 'Mental Health Crisis' for Parents

New studies show caregivers with young children are stressed, with no signs of relief on the horizon.



- Pre—Pandemic
 - 10-25% Peripartum Depression & Anxiety
 - 13% Use Drugs or Alcohol During Pregnancy¹
- Pandemic
 - Lebel et al, 2020 (N=2,000)²
 - 37% Peripartum Depression
 - 57% Peripartum Anxiety
 - Davenport et al, 2020 (N=900)³
 - 40% Peripartum Depression
 - 72% Peripartum Anxiety
 - Past month use of alcohol and heavy drinking days among women increased 17% and 41%, respectively⁴

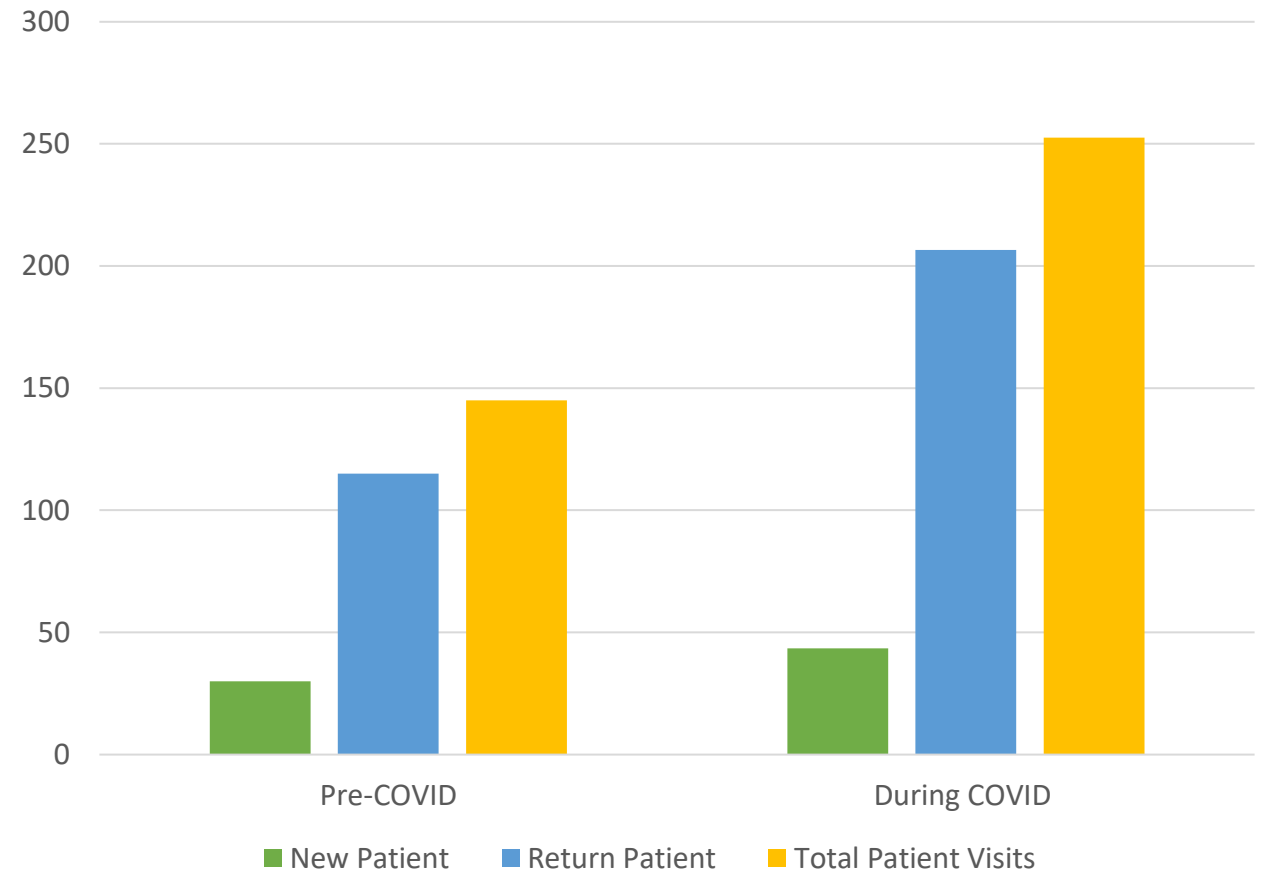
Source: Substance Abuse and Mental Health Services Administration (SAMHSA). 2018 national survey on drug use and health: *Annual Report*. 2020:1-58. ¹Lebel C, MacKinnon A, et al., Elevated depression and anxiety symptoms among pregnant individuals during the COVID-19 pandemic, *JAD* (2020); 277: 5-13²; Pillard MS, Tucker JS, Green HD. Changes in Adult Alcohol Use and Consequences During the COVID-19 Pandemic in the US. *JAMA Netw Open*. 2020;3(9):e2022942. doi:10.1001/jamanetworkopen.2020.22942⁴

MUSC's Women's Reproductive Behavioral Health Clinic

Av. Mo. Visits Pre-COVID & COVID

Clinical Service Growth

- Since March 15, 2020
 - > 450 Asynchronous Visits
 - Virtual Care/Zipnosis
- Av. Monthly Visits Increased
 - 45% New Patients
 - 80% Return Patients

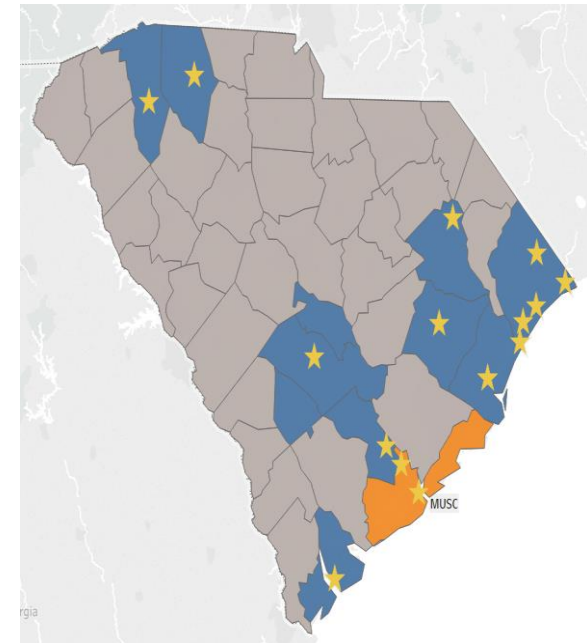
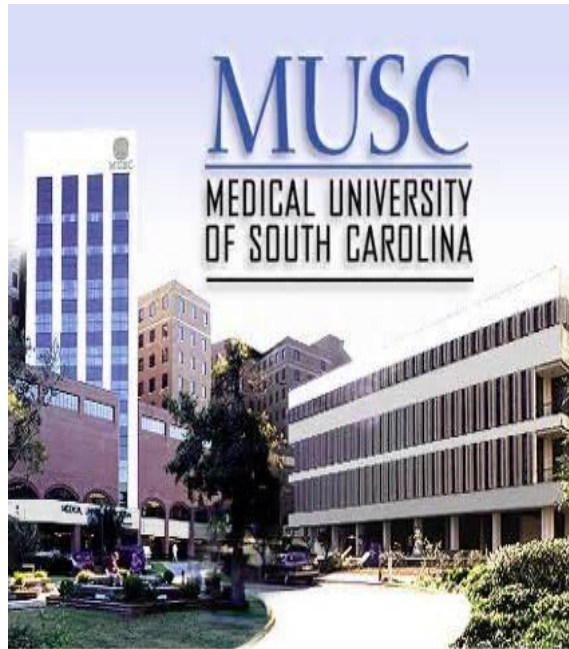


MUSC's Women's Reproductive Behavioral Health Division



- Our program specializes in the treatment of perinatal mental health and substance use problems [e.g., perinatal stress, trauma, perinatal loss, mood, anxiety, substance use, opioid use, psychotic disorders].
- Our program offers effective, home-video based treatments for perinatal mental health and substance use problems including therapy and/or medication.
- To access services, go to: www.MUSC.care and select "Get Care Now". Simply create an account and complete a "Women's Behavioral Health Screening".
- Upon completion of the screening, a care coordinator will contact you Monday-Friday 8am-5pm and provide any needed resources and schedule you for a home video appointment with providers that specialize in the treatment of perinatal mental health or substance use problems.

Women's Reproductive Tele Behavioral Health to Obstetric & Pediatric Practices in SC



Original Investigation | Psychiatry

Treatment of Opioid Use Disorder in Pregnant Women via Telemedicine

A Nonrandomized Controlled Trial

JAMA Network Open. 2020;3(1):e1920177

Constance Guille, MD, MSCR; Annie N. Simpson, PhD; Edie Douglas, MPH; Lisa Boyars, MD; Kathryn Cristaldi, MD, MHS; James McElligott, MD, MSCR; Donna Johnson, MD; Kathleen Brady, MD, PhD

Integrated Prenatal & OUD care in Ob

- **3 Telemedicine practices (N=44)**
- **1 In-person practice (N=54)**

N.S. Maternal Differences

- **Retention in treatment or Positive UDS**

N.S. Newborn Differences

- **NAS or Newborn Length of Stay**

Web-Based Treatment for Perinatal OUD



- **Resource for Ob/Gyn Providers**
 - Best practices
 - Guidelines
 - Special considerations
 - L&D, Pain, Breastfeeding



- **Resource Patients with OUD**
 - Psychoeducation
 - OUD
 - Treatments including MOUD
 - CBT/Relapse Prevention
 - Special considerations
 - DSS, Stigma, Pain,

Executive Summary:

Preliminary Focus Group Findings

PATIENTS [N=35]

- Valued communication and relationships with trusted care-providers
- Many questions, especially about medication
- Scared and worried, conflicting info from various providers adds to stress and uncertainty
- Value having a reliable source of info from someone they trust

PROVIDERS [N=30]

- Complex patient needs and competing demands on time
- Did not want to log in to 'another system'
- Provider knowledge gaps and/or lack confidence to treat OUD, prefer to refer to specialist
- Inadequate and inconsistent screening for OUD

Listening to Women



**MOBILE PHONE TEXT-MESSAGE
BASED SCREENING**



**REMOTE BRIEF INTERVENTION,
REFERRAL AND CARE
COORDINATION**



**HOME-BASED TELEMEDICINE
TREATMENT SERVICE.**



Text Message Based Screening



Brief Intervention

Remote Care Coordinator



Referral to Treatment

Telemedicine/ Office or Home
Follow up



Communicate with Ob/Peds Team

Screening information
Referral and Tx Progress



LTW, compared to In-Person
SBIRT, significantly more:

1) Screened Positive

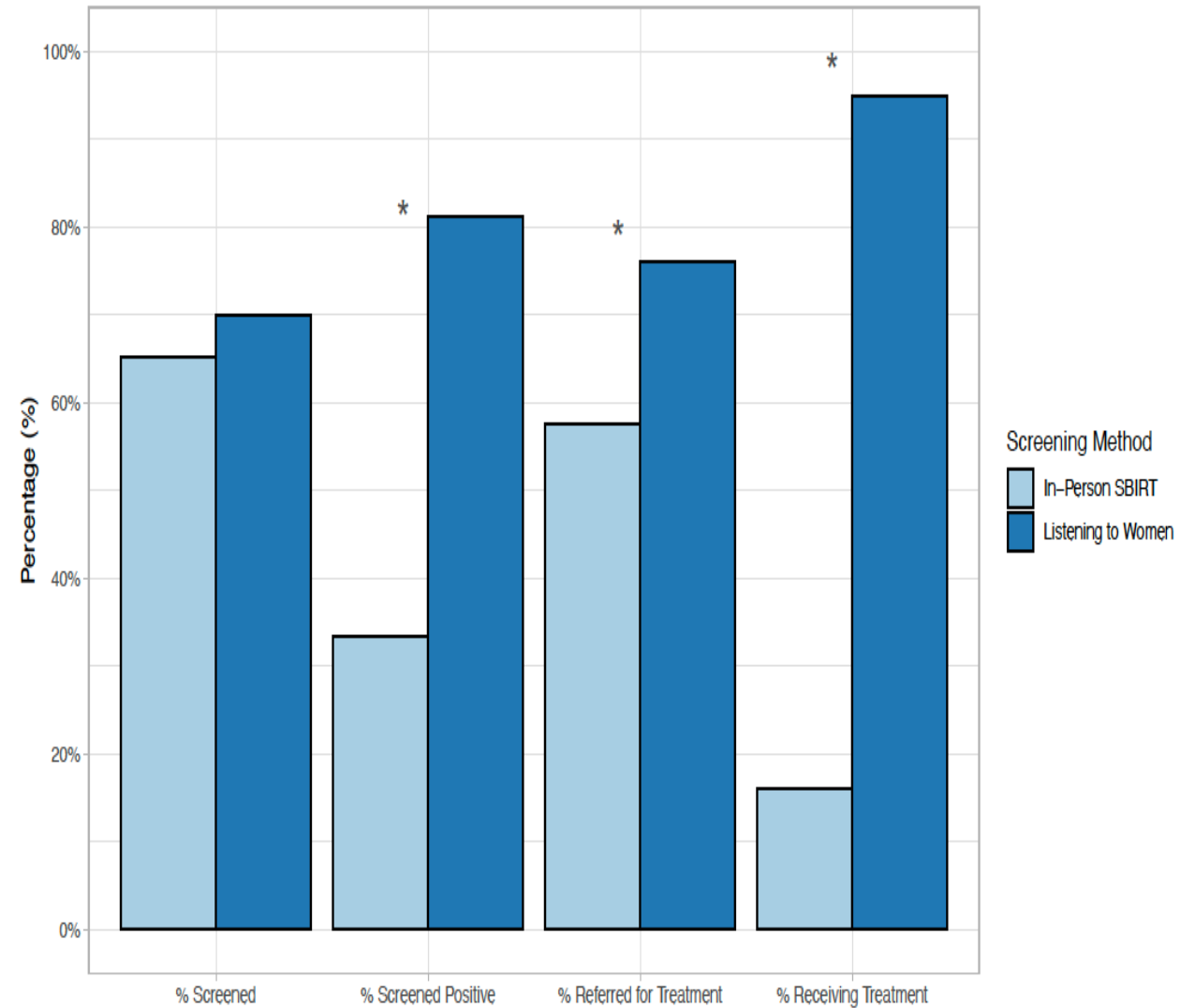
[81.15% vs. 33.33%; $\chi^2=169.50$, $p<0.0001$]

2) Were Referred to Treatment

[76.12% vs. 57.63%; $\chi^2=18.03$, $p<0.0001$]

3) Received Treatment

[94.91% vs. 16.04%; $\chi^2=245.41$, $p<0.0001$]



* $p \leq 0.0001$

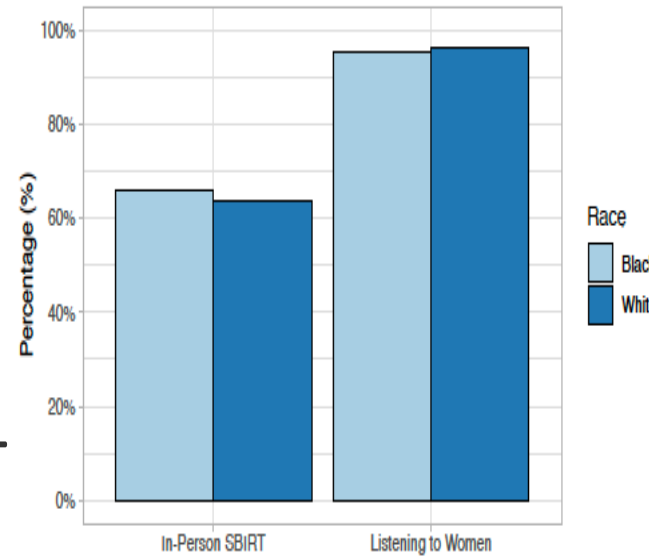
Figure B.

LTW: White women, compared to black women, were more likely to screen +

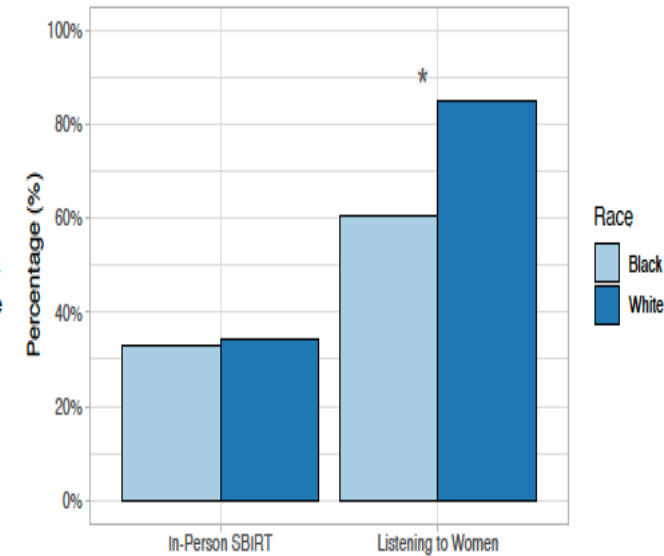
Figure D.

In-Person SBIRT: 14% of black women received Tx
LTW: 90% black women received treatment

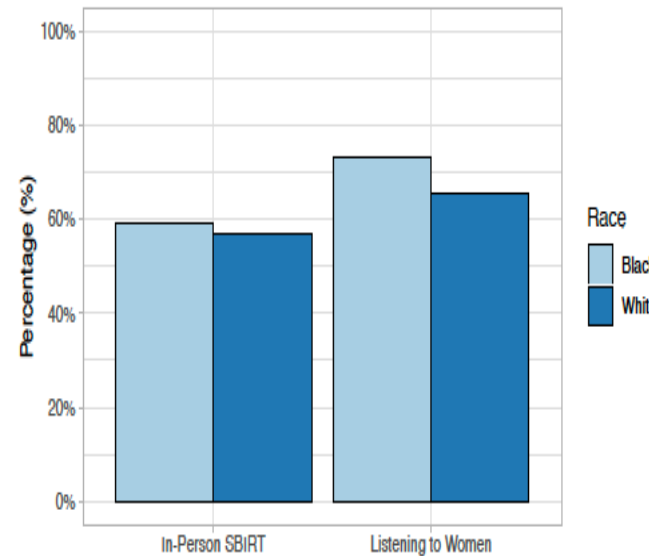
A Figure 2: % Screened by Screening Method and Race



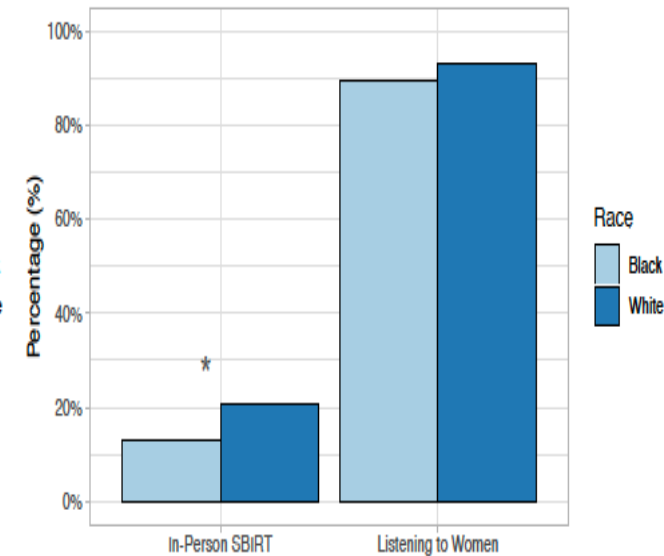
B Figure 2: % Screened Positive by Screening Method and Race



C Figure 2: % Referred for Treatment by Screening Method and Race



D Figure 2: % Received Treatment by Screening Method and Race



Current Research

NIH-NIDA

Focus Groups/Key-Informant Interviews

- Modify LTW based on feedback
 - Black women
 - Pregnant or postpartum
 - With and w/out PMADs and/or SUDs

Women's Reproductive Behavioral Health Division Clinical & Clinical Research Team



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Thank you!
